CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2010-XXXX ____

GENERAL ORDER
FOR
DAIRIES WITH MANURE ANAEROBIC DIGESTER OR CO-DIGESTER FACILITIES

The Discharger(s) shall comply with this Monitoring and Reporting Program (MRP) which is issued pursuant to California Water Code (CWC), Section13267. The Discharger(s) shall not implement any changes to this MRP unless and until the California Regional Water Quality Control Board, Central Valley Region, (hereafter "Central Valley Water Board") adopts, or the Executive Officer issues, a revised MRP.

This MRP describes requirements for monitoring co-digester feedstocks, solid manure, wastewater, storm water, and tailwater from the dairy and digester production areas and land application areas, tile drain effluent, digester solids (digestate solids produced by the digestion process); digester liquids; gas scrubber waste (produced during the cleaning of the biogas), and groundwater. Monitoring requirements also include monitoring of nutrients applied to, and removed from land application areas in order to demonstrate the effectiveness of the facility's Nutrient Management Plan (NMP). In addition, monitoring requirements include periodic visual inspections of the dairy and dairy manure digester/co-digester to ensure the facility is being operated and maintained to ensure continued compliance with the Waste Discharge Requirements General Order for Dairies with Manure Anaerobic Digesters or Co-digesters R5-2010-xxxx (Order).

Chemical analyses required to be performed by this MRP shall be conducted by a laboratory certified for such analyses by the California Department of Health Services (i.e., California certified Environmental Laboratory Accreditation Program [ELAP] laboratory) as specified by the California Code of Regulations, Title 22, Division 4, Chapter 19. Analytical procedures shall comply with the methods and holding times specified in the following: Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater (EPA); Test Methods for Evaluating Solid Waste (EPA); Methods for Chemical Analysis of Methods for the Examination of Water and Wastewater (APHA/AWWA/WEF); and Soil, Plant and Water Reference Methods for the Western Region (WREP 125). Approved editions shall be those that are approved for use by the United States Environmental Protection Agency or the California Department of Public Health's Environmental Laboratory Accreditation Program. The Discharger may propose alternative methods for approval by the Executive Officer.

The Discharger shall conduct monitoring, record-keeping, and reporting as specified below.

Monitoring Requirements

A. Co-Digester Feedstocks

1. Offsite generated feedstock material must be non-hazardous and chemically analyzed prior to delivery on site for pH, electrical conductivity (or total dissolved solids), percent moisture, total nitrogen, total phosphorus, total potassium, chloride, calcium, sodium, sulfate, and EPA 503 metals (arsenic, cadmium, chromium, copper, nickel, lead, selenium, zinc, and mercury). Manifests for all imported feedstock material must be retained on site for potential Central Valley Water Board staff review (see Section F – Record Keeping Requirements). The requirement to chemically analyze each feedstock prior to importation to the co-digester facility may be reduced or eliminated at the end of the first full year of operation if it can be demonstrated that the sampling performed was sufficient to evaluate changes/variability in the character and volume of feedstocks used. Any proposed reduction in monitoring requirements must be approved by the Executive Officer prior to implementation.

B. Visual Inspections of Dairy and Dairy Manure Digester/Co-Digester

1. Production Area (Includes dairy and digester facilities)

   a. Daily:

      (1) Inspect the digester equipment area (works) and record inspection time and any evidence of leaks, corrosion, cracks, or other signs of equipment failure, malfunction, or problems in plumbing, control equipment, feed-stock storage, etc., and the presence of nuisance conditions (vectors, odors).

      (2) Inspect the cattle carcass holding area for security and evidence of scavenging.

      (3) During and immediately after each significant storm event inspect storm water conveyance structures, drains, and the wastewater retention system for evidence of discharge to surface water, blockage, overtopping, freeboard, berm integrity, cracking, slumping, erosion, and seepage. A significant storm event is defined as a storm that results in continuous runoff of storm water for a minimum of one hour or intermittent runoff for a minimum of three hours in a 12-hour period.

b. Weekly during the wet season (December to March) and monthly on the first day of the month between April and November:

(1) Inspect the wastewater retention system for freeboard and ensure adequate capacity to retain the anticipated amount of wastewater and runoff that will be generated prior to the next opportunity to apply wastewater to the cropland. Freeboard shall be the vertical distance from the pond surface to the lowest elevation of the surrounding berm or the bottom of the spillway and shall be measured to the nearest 0.25 foot (3 inches). Monthly, photograph each lagoon showing the current freeboard on that date. All photographs shall be dated and maintained as part of the facility records.

(2) Inspect all dry waste, feedstock, and feed storage areas and note any conditions or changes that would result in discharges to surface water or off-site, and/or infiltration to underlying soil, and/or prevent drainage to the wastewater retention system and/or cause a condition of nuisance.

(4) Inspect all corrals and note any occurrence of standing water, mud/manure slurry, and/or saturated manure stockpiles that could result in infiltration of wastewater to underlying soil or cause a condition of nuisance.

c. Annually, no earlier than 1 September and no later than 1 November:

(1) Inspect all wastewater retention structures and note material conditions: berm integrity, cracking, slumping, erosion, excess vegetation, animal burrows, and/or seepage.

(2) Inspect all the storm water conveyance structures and equipment and note material conditions: integrity, proper functioning, and evidence of blockage, and/or leaks.

(3) Inspect all dry waste, manure, feedstock, and feed storage areas and note material conditions: appropriate drains, protection from rainfall and/or runoff, and measures to ensure that any leachate generated will drain to the wastewater retention system.

2. Land Application Area

a. Daily inspections required during wastewater applications:

(1) Inspect land application areas and note the condition of cropland, berms, surface water protection structures (banks, roadways, etc.), and any occurrence of animal burrows, piping, or bank erosion.

(2) Inspect land application fields being irrigated for the presence (or absence) of field saturation, excessive deposition of manure or digester solids, tailwater standing at downslope areas of the cropland fields or in conveyance ditches, erosion, runoff (including tailwater discharges from the downslope areas of the cropland fields, pipes, or other conveyances), and nuisance conditions.

(3) Inspect and note water supply wells within or adjacent to the land application area(s) for wastewater within 100 feet of any well, unless an alternative conservation practice or field-specific condition is in place which has demonstrated to provide pollutant reductions equivalent to or better than the reductions achieved by the 100-foot setback and has been approved by the Executive Officer.

b. Monthly during the growing season:

(1) Inspect and document land application areas with stunted growth or no growth areas. This information is necessary for conducting nutrient management on the individual land application fields and the facility as a whole.

c. Annually, prior to 1 October:

(1) Inspect all surface water protection features and structures. These structures shall be inspected for berm integrity, cracking, slumping, erosion, animal burrowing, and other evidence of failure or impending failure.

C. Discharge Monitoring

The discharge of manure/digestate or wastewater and/or stormwater runoff containing manure/digestate or wastewater to surface water bodies is prohibited by the Order. In the event of such a discharge due to a failure of equipment, facilities, and/or management practices, the Discharger shall monitor discharges of manure/digestate and/or process wastewater, storm water, and tailwater from the production area and the land application fields for the constituents and at the frequency specified below.

1. Unauthorized Discharges

a. Discharge monitoring - Daily during each discharge.

(1) Record the date, time, approximate volume (gallons) or weight (tons), duration, location, source, and ultimate destination of the discharge.

(2) Field measurements of the discharge for electrical conductivity and pH.

(3) Laboratory analyses of the discharge for nitrate-nitrogen, total ammonia-nitrogen, unionized ammonia-nitrogen, total Kjeldahl nitrogen, total phosphorus, total potassium, total dissolved solids (TDS), five day biochemical oxygen demand (BOD), total suspended solids (TSS), and total and fecal coliform.

b. Surface Water Monitoring - Daily upstream and downstream during discharge.

(1) Field measurements for electrical conductivity, dissolved oxygen, temperature, and pH.

(2) Laboratory analyses for nitrate-nitrogen, total ammonia-nitrogen, unionized ammonia-nitrogen, total Kjeldahl nitrogen, total phosphorus, total potassium, TDS, TSS, BOD, and total and fecal coliform.

All discharges shall be reported as specified in the Non-Compliance Reporting Requirements and Annual Reporting Requirements, as appropriate. The rationale for all discharge sampling locations shall be included in the reports.

2. Nutrient Monitoring
Effective immediately upon coverage under the Order, the Discharger shall begin monitoring process wastewater, digester effluent, dry wastes, and plant tissue produced at the facility, soil in each land application area, and irrigation water used on each land application area for the constituents and at the frequency as specified below. This information is for use in conducting nutrient management on the individual land application fields and the facility as a whole. The Discharger is encouraged to collect and use additional data, as appropriate, to refine nutrient management.

a. Wastewater

(1) The volume of wastewater discharged from all wastewater sources to the land application areas, shall be measured using a flow meter(s). Flow meters shall be capable of having their accuracy ascertained under actual working (field) conditions. Field calibrations shall be performed upon installation and, at a minimum, annually thereafter.

Flow meters shall be calibrated to within +/- 10% of actual flow, as measured under field conditions.

(2) Daily measure and record the volume (gallons or acre feet) and electrical conductivity of digester/co-digester effluent discharged into the facilities wastewater retention system or to the land application areas.

(3) For each application, measure and record the volume (gallons or acre feet) of process wastewater applied to each land application area field and the date of the application.

(4) Monthly measure and record the electrical conductivity in each wastewater retention pond.

(5) For a dairy manure digester or dairy co-digester that utilizes plant material that has been grown on site for co-digestion feedstock:

(a) Quarterly for one year and annually thereafter, conduct laboratory analyses of the wastewater being discharged by the digester or co-digester prior to blending with irrigation water for: pH, total dissolved solids, electrical conductivity, nitrate-nitrogen, ammonium-nitrogen, total Kjeldahl nitrogen, total phosphorus, and total potassium.

(b) Once within 12 months of issuance of an NOA, and bi-annually (once every two years) thereafter, conduct laboratory analyses for general minerals (bicarbonate, carbonate, chloride, calcium, sodium, sulfate, magnesium), and iron, copper, and manganese. Sampling shall be conducted concurrent with a sampling event performed under (a) above.

(6) For a dairy co-digester that imports feedstocks - Quarterly for one year and semi-annually (twice per year) thereafter, laboratory analyses of the wastewater being discharged by the co-digester prior to mixing in a dairy wastewater pond or blending with irrigation water for: pH, total dissolved solids, electrical conductivity, nitrate-nitrogen, ammonium-nitrogen, total Kjeldahl nitrogen, boron, total phosphorus, total potassium, bicarbonate, carbonate, chloride, calcium, magnesium, sodium, sulfate, copper, iron, manganese, and EPA 503 metals (arsenic, cadmium, chromium, copper, nickel, lead, selenium, zinc, and mercury). The introduction of a new feedstock or a substantial change in feedstock composition will require restarting of quarterly monitoring. After two years of analytical data have been collected, the Discharger may request a reduction in the constituents

analyzed and the sampling frequency based upon a demonstration of consistency of feedstock sources and analytical data. Proposed changes can only be implemented following approval of the Executive Officer.

b. Solid Manure

(1) The Discharger must record the percent moisture and total weight in tons applied during each application of manure to cropland.

(2) The percent moisture and total weight in tons must be recorded for each off-site export of manure.

(3) Once within 12 months of issuance of an NOA, and bi-annually thereafter: Analyze for general minerals (calcium, magnesium, sodium, bicarbonate, carbonate, sulfide, and chloride) and total fixed solids.

(4) Twice per year: Analyze for total nitrogen, total phosphorus, total potassium, and percent moisture.

c. Digestate/Digester Generated Soil Amendment

(1) The Discharger must record the percent moisture and total weight in tons of digestate/digester generated soil amendment applied during each application to cropland.

(2) The percent moisture and total weight in tons must be recorded for each off-site export of digestate/digester generated soil amendment.

(3) For a dairy manure digester - Twice per year perform chemical analyses of the digestate/digester generated soil amendment for total nitrogen, total phosphorus, total potassium, and percent moisture.

(4) For a dairy manure digester – Once within 12 months of issuance of an NOA, and bi-annually thereafter: Analyze digestate/digester generated soil amendment for calcium, magnesium, sodium, bicarbonate, carbonate, sulfate, chloride and total fixed solids.

(5) For a dairy co-digester - Annually, at each application to the land application area, and prior to each export, analyze digestate/digester generated soil amendment for pH, electrical conductivity (or total fixed solids), percent moisture, total nitrogen, total phosphorus, total potassium, chloride, calcium, sodium, sulfate, and EPA 503 metals (arsenic, cadmium, chromium, copper, nickel, lead, selenium, zinc,

and mercury). After two years of analytical data have been collected, the Discharger may request a reduction in the constituents analyzed and the sampling frequency based upon a demonstration of consistency of feedstock sources and analytical data. Proposed changes can only be implemented following approval of the Executive Officer.

(6) For a dairy manure digester and dairy co-digester - Annually record the total dry weight (tons) of digestate/digester generated soil amendment applied to each land application area and the total dry weight (tons) of dry manure and digestate exported offsite. A site map identifying the specific fields or area(s) of dry manure and the amount of digestate application in tons must be included in the annual report.

d. Plant Tissue (At Harvest)

(1) Record the total weight (tons) and percent moisture of harvest materials removed from each land application field.

(2) Analyze for total nitrogen, total phosphorus, and total potassium (expressed on a dry weight basis), total fixed solids, and moisture (if weight of harvested material is reported) or density (if volume of harvested material is reported).

e. Soil

(1) Within 12 months following issuance of an NOA and once every five years thereafter, prior to spring planting at each land application field.

(a) In the root zone for the crop to be planted (0 to one foot depth): analyze for nitrate-nitrogen, total phosphorus, organic matter, and electrical conductivity. Co-digestion operations are required to add soil analysis for EPA 503 metals (arsenic, cadmium, chromium, copper, nickel, lead, selenium, zinc, and mercury).

(b) Below the root zone (1 to 2 foot depth): analyze for nitrate-nitrogen and electrical conductivity.

(2) Within 12 months following issuance of an NOA and once every five years thereafter, prior to fall planting at each land application field.

(a) In the root zone of the crop to be planted (0 to one foot depth): analyze for nitrate-nitrogen, soluble phosphorus, potassium, organic matter, and electrical conductivity.

(b) Below the root zone (1 to 2 foot depth): analyze for nitrate-nitrogen, and electrical conductivity.

f. Irrigation Water

(1) Each irrigation event for each land application area:

(a) Record the date, volume (gallons or acre-inches), field number or name, and source (well or canal) of irrigation water applied.

(2) One irrigation event during each irrigation season:

(a) For each source of irrigation water, analyze for: calcium, potassium, phosphorous, sodium, magnesium, bicarbonate, carbonate, sulfate, chloride, total fixed solids, electrical conductivity and total nitrogen.

g. Subsurface Tile Drainage Water

(1) Within 12 months following issuance of an NOA and annually thereafter:

(a) Conduct field measurements of electrical conductivity, temperature, and pH.

(b) Conduct chemical analysis for: calcium, potassium, phosphorous, sodium, magnesium, bicarbonate, carbonate, sulfate, chloride, total fixed solids, nitrate-nitrogen, nitrite-nitrogen, ammonium-nitrogen, and total Kjeldahl nitrogen.

D. Groundwater Monitoring

1. The Discharger shall install a groundwater monitoring system or provide documentation that the Discharger has applied to or joined an approved Representative Monitoring Program (RMP) and demonstrated that data from the approved RMP can be substituted for some or all of the groundwater monitoring data that would be collected under the individual groundwater monitoring system. The Executive Officer may require the Discharger in a RMP to install and monitor some groundwater monitoring wells if site specific data indicate groundwater quality objectives have been exceeded beneath the site, or if the RMP does not provide sufficient or representative data that can be applied to all areas or conditions existing at the facility.

2. A groundwater monitoring system shall consist of sufficient monitoring wells to:

   a. Characterize groundwater flow direction and gradient beneath the site;

   b. Characterize natural background groundwater quality upgradient of the facilities; and

   c. Characterize groundwater quality upgradient and downgradient of each waste management unit, including: the corrals, dairy retention ponds, digester/co-digester retention ponds, and the land application areas.

3. Prior to installation of monitoring wells, the Discharger shall submit to the Executive Officer a Monitoring Well Installation and Sampling Plan (MWISP) and schedule prepared by, or under the direct supervision of, and certified by, a California registered civil engineer or a California professional geologist with experience in hydrogeology. Details and required elements of the MWISP are included in Attachment A to this Monitoring and Reporting Program. Monitoring well installation shall not begin prior to approval of the MWISP by the Executive Officer.

4. Sampling of the groundwater monitoring system shall be performed on the following schedule:

   a. Initially – Two quarters (one sampling event every three month period [quarter] for two consecutive quarters) prior to initial discharge from the facility.

   b. Quarterly sampling for two years and semi-annual thereafter.

5. Sample parameters to be measured/analyzed include:

   a. The depth to groundwater from a surveyed reference point to the nearest 0.01 foot in each monitoring well;

   b. Field measure pH, temperature, and electrical conductivity; and

   c. Chemical analysis for nitrate-nitrogen, nitrite-nitrogen, ammonium-nitrogen, total Kjeldahl nitrogen, calcium, potassium, sodium, magnesium, bicarbonate, carbonate, sulfate, chloride, boron, iron, manganese, total phosphorus, and total dissolved solids.

6. In addition to the system of monitoring wells, the Discharger shall annually monitor existing domestic and agricultural supply wells and provide a map showing the well locations and designations. Groundwater samples from

domestic wells shall be collected from a point (tap or faucet) before the pressure tank and only after water has flowed from this tap for 10 to 20 minutes. If the sample cannot be collected prior to a pressure tank, the well must be purged at least twice the volume of the pressure tank. Groundwater samples from agricultural supply wells shall be collected after the pump has run for a minimum of 30 minutes or after at least three well volumes have been purged from the well immediately prior to sample collection.

a. Sample collection shall be annually for:

(1) Field measurements for pH, temperature, and electrical conductivity; and

(2) Analyze for nitrate-nitrogen, nitrite-nitrogen, ammonium, total Kjeldahl nitrogen, calcium, potassium, sodium, magnesium, bicarbonate, carbonate, sulfate, chloride, boron, iron, manganese, total phosphorus, total dissolved solids, and total coliform organisms.

When special procedures appear to be necessary, the Discharger may request approval of alternative sampling procedures. The Executive Officer will review such requests and if adequate justification is provided, may approve the requested alternative sampling procedures.

E. General Monitoring Requirements

1. The Discharger shall comply with all the "Requirements Specifically for Monitoring Programs and Monitoring Reports" as specified in the Standard Provisions and Reporting Requirements.

2. Approved sampling procedures are listed on the Central Valley Water Board's web site at http://www.waterboards.ca.gov/centralvalley/available_documents/index.html #confined. When special procedures appear to be necessary at an individual dairy, digester, or co-digester facility, the Discharger may request approval of alternative sampling procedures for nutrient management. The Executive Officer will review such requests and if adequate justification is provided, may approve the requested alternative sampling procedures.

3. Field activity reports shall be created for each monitoring event, one record for each monitored location (monitoring well, water supply well, surface water body, cropland field). The field activity reports shall identify the technician performing the fieldwork, the technician's affiliation, the entity commissioning the work (property owner, contractor, consultant, etc.), the location of the work, the identification of the sampled location, and the date(s) of the work.

The field activity record shall be prepared and signed by the field technician in the field when the work is performed.

4. The Discharger shall use clean sample containers and sample handling, storage, and preservation methods that are accepted or recommended by the selected analytical laboratory or, as appropriate, in accordance with approved United States Environmental Protection Agency analytical methods (see paragraph three on page one of this Order). All samples containers shall be labeled and records maintained to show the time and date of collection as well as the person collecting the sample and the sample location.

5. All samples collected shall be representative of the volume and nature of the material being sampled.

6. All samples containers shall be labeled and records maintained to show the time and date of collection as well as the person collecting the sample and the sample location.

7. All samples collected for laboratory analyses shall be preserved and submitted to the laboratory within the required holding time appropriate for the analytical method used and the constituents analyzed. Special care should be exercised when collecting water samples for metals or cation analyses. These samples are required to be filtered in the field and place into appropriately acidified bottles for transport to the laboratory.

8. All samples submitted to a laboratory for analyses shall be identified in a properly completed and signed Chain of Custody form.

9. Field test instruments used for pH, electrical conductivity and dissolved oxygen may be used provided:

   a. The operator is trained in the proper use and maintenance of the instruments;

   b. The instruments are field calibrated prior to each monitoring event; and

   c. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency.

F. Record Keeping Requirements

Dischargers shall maintain on-site for a period of five years from the date they are created all information as follows (Owners must maintain their own copies of this information):

1. All information necessary to document implementation and management of the minimum elements of the nutrient management plan (NMP);

2. All records for the production area and digester including:

    a. Records documenting actions taken to correct deficiencies noted during the inspections required in the Monitoring Requirements above. Deficiencies not corrected in 30 days must be accompanied by an explanation of the factors preventing immediate correction;

    b. Records of the date, time, and estimated volume of any digester bypass and/or overflow or leaks from any wastewater conveyance or storage structure;

    c. Records documenting the monthly wastewater electrical conductivity measurements in each main wastewater retention pond;

    d. Records of mortality management and practices;

    e. Records of all manure and digestate/digester generated soil amendment exported from the facility which includes information on the hauler, destination, dates hauled, and amount exported.

    f. Action taken and date(s) to correct unauthorized releases as reported in accordance with **G.1. Non-compliance Reporting Requirements** below.

    i. Records of monitoring activities, field activity records, and laboratory analyses conducted as required in sections **C., Discharge Monitoring**, **D., Groundwater Monitoring**, and **E., General Monitoring Requirements** above.

    j. For Dischargers operating a dairy co-digester, record the volume, character, and origin of all imported feed stocks including copies of manifests and the results of chemical analyses for pH, electrical conductivity (or total dissolved solids), percent moisture, total nitrogen, total phosphorus, total potassium, chloride, calcium, sodium, sulfate, and EPA 503 metals (arsenic, cadmium, chromium, copper, nickel, lead, selenium, zinc, and mercury);

3. All records for the land application area including:

    a. Expected and actual crop yields;

b. Identification of crop, acreage, dates of planting and harvest, and actual crop yields for each field. Dates, locations, and approximate weight and moisture content, or volume and density, of manure applied to each field;

c. Dates, locations, and volume of process wastewater applied to each field;

d. Weather conditions at time of manure and process wastewater applications and for 24 hours prior to and following applications;

e. Records documenting the inspections conducted as required under the Monitoring Requirements above;

f. Dates, locations (including a map of the irrigation well locations, tile drainage sampling points, or canal sampling points and their sample designations), and test methods for soil, manure, process wastewater, irrigation water, tile drainage effluent, and plant tissue sampling;

g. Results from manure, process wastewater, irrigation water, soil, plant tissue, discharge (including tailwater), and storm water sampling;

h. Explanation for the basis for determining manure or process wastewater application rates, as provided in the Technical Standards for Nutrient Management established by the Order (Attachment D);

i. Calculations showing the total nitrogen, total phosphorus, and potassium applied to each field, including sources other than manure or process wastewater;

j. Total amount of nitrogen, phosphorus, and potassium actually applied to each field, including documentation of calculations for the total amount applied;

k. The method(s) used to apply manure and/or process wastewater;

l. Dates of manure and/or process wastewater application equipment inspections;

m. Records documenting any corrective actions taken to correct deficiencies noted as a result of the inspections required in the Monitoring Requirements above. Deficiencies not corrected in 30 days must be

accompanied by an explanation of the factors preventing immediate correction; and

n. Records of monitoring activities and laboratory analyses conducted as required in Standard Provisions and Reporting Requirements.

4. A copy of the Discharger's site-specific NMP.

5. All exports of wastes or soil amendments off of the facility shall be tracked using the Manure, Digestate/Digester Generated Soil Amendment Tracking Manifest forms (Attachment F) which includes information on the hauler, destination, dates hauled, amount hauled, and a certification; and

6. All analyses of manure, digestate/soil amendment, process wastewater, irrigation water, soil, plant tissue, unauthorized discharges, surface water, storm water, subsurface tile drainage effluent, and groundwater.

G. Reporting Requirements

1. Non-Compliance Reporting Requirements

   a. The Discharger shall report any noncompliance that endangers human health or the environment or any noncompliance with Prohibitions A.1, through A.4, A.7, A.9, A.13, A.14, and A.15 in the Order, **within 24 hours** of becoming aware of its occurrence. The incident shall be reported to the Central Valley Water Board Office, local environmental health department, and to the California Office of Emergency Services (OES). During non-business hours, the Discharger shall leave a message on the Central Valley Water Board's voice mail. The message shall include the time, date, place, and nature of the noncompliance, the name and number of the reporting person, and shall be recorded in writing by the Discharger. The OES is operational 24 hours a day.

   b. A written report shall be submitted to the Central Valley Water Board office **within two weeks** of the Discharger becoming aware of the incident. The report shall contain a description of the noncompliance, its causes, duration, and the actual or anticipated time for achieving compliance. The report shall include complete details of the steps that the Discharger has taken or intends to take, in order to prevent recurrence. All intentional or accidental spills shall be reported as required by this provision. The written submission shall contain:

      (1) The approximate date, time, and location of the noncompliance including a description of the ultimate destination of any unauthorized

discharge and the flow path of such discharge to a receiving water body;

(2) A description of the noncompliance and its cause;

(3) The flow rate, volume, and duration of any discharge involved in the noncompliance;

(4) The amount of precipitation (in inches) the day of any discharge and for each of the seven days preceding the discharge;

(5) A description (location; date and time collected; field measurements of pH, temperature, dissolved oxygen and electrical conductivity; sample identification; date submitted to laboratory; analyses requested) of noncompliance discharge samples and/or surface water samples taken to comply with the Monitoring Requirements above for *Unauthorized Discharges (Including Off-Property Discharges) of Manure or Process Wastewater From the Production Area or Land Application Area* and *Storm Water Discharges to Surface Water from the Production Area*;

(6) The period of noncompliance, including dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue;

(7) A time schedule and a plan to implement corrective actions necessary to prevent the recurrence of such noncompliance; and

(8) The laboratory analyses of the noncompliance discharge sample and for instances of a discharge to surface water, the laboratory analyses of the upstream and downstream surface water samples; shall be submitted to the Central Valley Water Board office within 45 days of the discharge.

2. Annual Reporting Requirements

a. An Annual Report is due by **1 August** of each year for the previous year's monitoring, planting and harvesting. The annual report shall include all the information as specified below:

(1) Summary of the crops grown in the facility cropland to include: field identification, type, date planted and harvested, and amount harvested;

(2) The maximum number and type of animals, and number maintained in each type of confinement (free-stalls or open corrals) during the reporting period;

(3) Statement reporting the type of manure removal practices in each type of confinement (i.e., flush lanes, dry scrape, vacuum pickup, etc.);

(4) Provide the amount of total dry manure (tons) and process wastewater (gallons) generated by the facility during the annual reporting period and a calculation of the total nitrogen, total phosphorus, potassium, and total salt content measured as total fixed solids;

(5) Summary of all storm water discharges from the production area to surface water during the annual reporting period, including the date, time, approximate volume, duration, location, and a map showing the discharge and sample locations, rationale for sample locations, and method of measuring discharge flows. If discharges do not occur, then report this fact.

(6) Summary of all discharges from the cropland to surface water that have occurred during the annual reporting period, including the date, time, approximate volume, location, source of discharge (i.e., tailwater, process wastewater, or blended process wastewater), a map showing the discharge and sample locations, rationale for sample locations, and method of measuring discharge flows.

(7) Copies of records documenting the monthly wastewater electrical conductivity measurements in each wastewater retention pond.

(8) Copies of laboratory analyses of all discharges (tile drain effluent, dry waste, wastewater, digester effluent, or tailwater), surface water (upstream and downstream of a discharge), and storm water, including chain-of-custody forms and laboratory quality assurance/quality control results.

(9) Tabulated field measurement and analytical data for samples of tile drain effluent, dry waste, wastewater, digester effluent, irrigation water, soil, and plant tissue. The data shall be tabulated to clearly show sample dates, constituents analyzed, constituent concentrations, and detection limits.

(10) Tabulated irrigation and nutrient application data for each land application area. The data shall be tabulated to show each field, area

(acreage), crop(s) grown, amount and source of irrigation water, and the amount and source of nutrients and salt added (irrigation water, dry waste, wastewater, or fertilizer).

(11) Calculations showing the total nitrogen, phosphorus, potassium, and non-nutrient salts applied to each field, including from sources other than dry waste or wastewater and a statement indicating how the NMP will be modified to bring the facility back into compliance with the Order.

(12) Calculations showing the nitrogen and salt balance for each land application area and the facility as a whole during the reporting period. The balance shall be determined by the amount of nitrogen and salt present in the cropland soil at the beginning of the reporting period, plus the amount added by dry waste, wastewater, and/or fertilizer, and minus the amount removed by harvest and/or export from the facility.

(13) If the amount of salt exceeded 2,000 pounds per acre for single crop fields or 3,000 pounds per acre for double crop fields; for any field, a statement indicating how the NMP will be modified to bring the facility back into compliance with the Order.

(14) Copies of all records and reports prepared for paragraph **G.1. Non-Compliance Reporting** above.

(15) Copies of all facility corrective action reports which resulted from inspections for the past year.

3. Groundwater Reporting Requirements

a. The Discharger shall report the results of all groundwater monitoring concurrently with the annual report.

b. Groundwater monitoring reports shall include:

(1) Copies of all field activity reports, chain-of-custody forms, and laboratory analyses (including laboratory quality assurance/quality control results) for each well sample (water supply wells and monitoring wells) collected.

(2) Tabulated groundwater elevation data showing date of measurement, depth to water, wellhead elevation and groundwater elevation in each monitoring wells.

(3) Tabulated analytical results for the well samples showing date of sampling, constituents analyzed, and detected concentrations. The tabulated data shall include both historical and current information.

(4) A potentiometric contour map showing the groundwater flow direction, gradient, and elevations for each groundwater sampling event conducted during the reporting period.

(5) The groundwater monitoring reports shall be certified by a California registered professional.

4. Groundwater Limitations Analysis Report – By 12 months after achieving coverage under the Order, the Discharger shall submit to the Executive Officer a Groundwater Limitations Analysis report consistent with the Order.

   a. This report shall contain an evaluation of the groundwater quality and flow data to assess tends.

   b. Data shall be presented and evaluated to address:

      (1) The groundwater monitoring program's adequacy to assess compliance with the Order.

      (2) Whether groundwater data provided is representative of conditions up gradient of the influence of the facility and waste management areas (land application fields, corrals, digester/dairy ponds, tailwater systems, croplands, etc.).

      (3) Whether groundwater data provided is representative of conditions down gradient of the major waste management areas (wastewater retention system, corrals, digester works, and cropland) of the facility.

      (4) Whether monitoring has been conducted in compliance with the Order and consistent with this MRP.

   c. The report shall propose specific numeric groundwater limitations for each waste constituent that reflects full implementation of best practicable treatment or control (BPTC) and reflecting applicable water quality objectives for that waste constituent. The report shall describe in detail how these were determined considering actual data from monitoring wells comprising the approved groundwater monitoring program, impact reductions through full implementation of BPTC, the factors in CWC 13241, Resolution 68-16, and the Sacramento River and San Joaquin River and Tulare Lake Basin Plans. The Discharger may submit results of

a validated groundwater model or other hydrogeologic information to support the proposed numeric groundwater limitations.

H. General Reporting Requirements

1. The results of any monitoring conducted more frequently than required at the locations specified herein shall be reported to the Central Valley Water Board.

2. Laboratory analyses for manure, digestate/soil amendment, process wastewater, and soil shall be submitted to the Central Valley Water Board upon request by the Executive Officer.

3. Each report shall be signed by the Discharger or a duly authorized representative as specified in the General Reporting Requirements C.7 of the Standard Provisions and Reporting Requirements (SPRR), and shall contain the following statement:

   "*I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.*"

4. For facilities in Fresno, Kern, Kings, Madera, Mariposa, and Tulare counties, submit reports to:

   California Regional Water Quality Control Board
   Central Valley Region
   1685 E Street
   Fresno, CA 93706
   Attention: Confined Animal Regulatory Unit

   For facilities in Butte, Lassen, Modoc, Plumas, Tehama, and Shasta counties, submit reports to:

   California Regional Water Quality Control Board
   Central Valley Region
   415 Knollcrest Drive, Suite 100
   Redding, CA 96002
   Attention: Confined Animal Regulatory Unit

   For facilities in all other counties, submit reports to:

   California Regional Water Quality Control Board
   Central Valley Region
   11020 Sun Center Drive #200
   Rancho Cordova, CA 95670
   Attention: Confined Animal Regulatory Unit